Complete Summary

GUIDELINE TITLE

Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test.

BIBLIOGRAPHIC SOURCE(S)

Littner MR, Kushida C, Wise M, Davila DG, Morgenthaler T, Lee-Chiong T, Hirshkowitz M, Loube DL, Bailey D, Berry RB, Kapen S, Kramer M. Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test. Sleep 2005 Jan 1;28(1):113-21. [18 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Excessive sleepiness, including narcolepsy and idiopathic hypersomnia

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
Diagnosis
Evaluation

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Neurology
Pediatrics
Sleep Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To present recommendations for the clinical use of the multiple sleep latency test (MSLT) and the maintenance of wakefulness test (MWT)

TARGET POPULATION

Adults and adolescents with:

- Suspected narcolepsy
- Suspected idiopathic hypersomnia
- The inability to remain awake where there may be a safety issue
- Narcolepsy or idiopathic hypersomnia to assess response to treatment with medications

INTERVENTIONS AND PRACTICES CONSIDERED

1. Multiple Sleep Latency Test (MSLT)
2. Maintenance of Wakefulness Test (MWT)

MAJOR OUTCOMES CONSIDERED

- Clinical utility of Multiple Sleep Latency Test (MSLT) and Maintenance of Wakefulness Test (MWT)
- Mean sleep latency values

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

An initial Medline search for articles on the Multiple Sleep Latency Test (MSLT) and Maintenance of Wakefulness Test (MWT) was performed on January 7, 2000. The following string of search terms was used: Multiple Sleep Latency Test or MSLT or Maintenance of Wakefulness or MWT or hypersomnia or hypersomnolence or daytime alertness, daytime sleepiness or daytime wakefulness or daytime somnolence. The search was limited to human research and only to articles published in English, French, or Japanese. This generated a total of 3,162 references. There were 2,864 in English, 199 in French, and 99 in Japanese. Similar searches on Psych Lit and Carl UnCover databases revealed no additional articles. An initial screening excluded the following: publications prior to 1976, articles in non-peer reviewed journals, and book chapters. This resulted in 2,195 potentially relevant articles.

All articles were screened based on title and English language abstract, if provided, to select studies that employed the MSLT or MWT. The inclusion criteria were publication in peer-reviewed journal and use of the MSLT or MWT. The exclusion criteria included abstracts, reviews, theoretical papers, editorials, case studies, drug studies, and human leukocyte antigen (HLA) studies. Studies using narcolepsy patients who were required to have sleep-onset of rapid eye movement periods (SOREMPs) on a previous MSLT were also excluded. Studies where the results of the MSLT were not given were also excluded. This resulted in a total of 495 potentially relevant articles. A second screening of the titles and abstracts not selected was performed by two other reviewers and an additional 150 papers were added to the potentially relevant list of articles for a total of 645 (495+ 150) papers for subsequent review.

On October 18, 2000, an additional Medline search was done to update the initial one using the same terms and conditions for the time period 1999-2000. This resulted in an additional 122 new citations. Review of these titles and abstracts, using the same inclusion and exclusion criteria as above, resulted in an additional 28 potentially relevant articles for a total of 673 (645+28). "Pearling," the process of manually scanning bibliography lists from manuscripts captured on the searches for additional relevant references not detected by Medline, netted an additional 15 citations. This resulted in a total of 688 (673+15) references.

On August 28, 2002, another Medline search was performed using the same terms and conditions for the time period 2000-2002. This resulted in 434 citations being identified. Using the same exclusion-inclusion criteria, 34 potentially relevant articles were identified for a total of (688 + 34) 722 references.

On October 9, 2003, a final Medline search was performed using the same terms and conditions for the time period 2002-2003. This resulted in 56 citations being identified. Using the same exclusion-inclusion criteria, 56 potentially relevant articles were identified for a total of (722+56) 778 references.

The titles and abstracts of the 778 papers were each screened by two reviewers to select those with adequately described data relevant to one of eight topics. Two topics were randomly assigned to each reviewer. Inclusion criteria were study appropriate to topic, test means, and standard deviations (SD) or standard error of the means (SEM) provided. Exclusion criteria included non-standard test procedure. If there was not enough information in the title and abstract to make a determination, the article was obtained and examined in more detail to determine

acceptability. The topics and numbers of references (in parentheses) identified in each group for further review included:

1. Number of sleep-onset of rapid eye movement periods in narcolepsy (28)
2. Sleep latency mean on MSLT in narcolepsy (40)
3. Sleep latency mean on MSLT or MWT in idiopathic hypersomnia (13)
4. Sleep latency mean on MSLT or MWT pre- and post-treatment of obstructive sleep apnea (OSA), periodic limb movement disorder (PLMD), insomnia and restless legs syndrome (RLS) (106)
5. Sleep latency mean on MSLT or MWT in medical and neurological conditions (45)
6. Sleep latency mean on MSLT or MWT on safety (33)
7. MSLT or MWT in pre- and post-drug treatment (74)

The pre- and post-drug treatment topic was added after all articles had been screened to exclude drug studies, so all 2,195 citations were again screened for this topic. Normative data was not pre-selected but obtained from other articles when found.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Level I (Grade A Recommendation): Randomized well-designed trials with low alpha and beta error*

Level II (Grade B Recommendation): Randomized trials with high alpha and beta error*

Level III (Grade C Recommendation): Nonrandomized concurrently controlled studies

Level IV (Grade C Recommendation): Nonrandomized historically controlled studies

Level V (Grade C Recommendation): Case series

*Alpha error refers to the probability (generally set at 95% or greater) that a significant outcome (e.g., $p<0.05$) is not a result of chance occurrence. Beta error refers to the probability (generally set at 80 to 90% or greater) that a nonsignificant result (e.g., $p>0.05$) is the correct conclusion of the study or studies. The estimation of beta error is generally the result of a power analysis. The power analysis includes a sample size analysis to project the size of the study population necessary to ensure that significant differences will be observed if actually present.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

A Task Force of content experts was appointed by the American Academy of Sleep Medicine to perform a comprehensive review of the scientific literature and grade the evidence regarding the clinical use of the Multiple Sleep Latency Test (MSLT) and the Maintenance of Wakefulness Test (MWT). Practice parameters were developed based on this review and in most cases evidence based methods were used to support recommendations. When data were insufficient or inconclusive, the collective opinion of experts was used to support recommendations.

All papers for each topic had two reviewers with a third reviewer to resolve differences. Only articles rejected by all reviewers on a topic were eliminated from further consideration. Full-length articles were obtained and examined for all selected references in each topic.

Data extraction sheets were developed prior to review of the articles. These included the following information: study design, number and gender of subjects, subject selection criteria, definition of sleep latency, MSLT/MWT methodology, means and standard deviations (SD) or standard error of the means (SEM) by groups, biases, and conclusions. A separate data sheet was developed for the sleep onset rapid eye movement (REM) periods (SOREMP) and sleep latency data in narcolepsy that included the above information along with diagnostic criteria and number of SOREMPS.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When data were insufficient or inconclusive, the collective opinion of experts was used to support recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Standard: This is a generally accepted patient-care strategy, which reflects a high degree of clinical certainty. The term standard generally implies the use of Level I Evidence, which directly addresses the clinical issue, or overwhelming Level II Evidence.

Guideline: This is a patient-care strategy, which reflects a moderate degree of clinical certainty. The term guideline implies the use of Level II Evidence or a consensus of Level III Evidence.

Option: This is a patient-care strategy, which reflects uncertain clinical use. The term option implies either inconclusive or conflicting evidence or conflicting expert opinion.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

These recommendations were developed by the Standards of Practice Committee and reviewed and approved by the Board of Directors of the American Academy of Sleep Medicine.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Levels of recommendation (Standard, Guideline, and Option) and levels of evidence (I-V) are defined at the end of the "Major Recommendations" field.

General Recommendations

1. The Multiple Sleep Latency Test (MSLT) is a validated objective measure of the ability or tendency to fall asleep. (Arand et al., 2005; Sections 2.2; 2.5; 2.6; 2.7; 6.2.7) (Standard)
2. The Maintenance of Wakefulness Test (MWT) is a validated objective measure of the ability to stay awake for a defined time. (Arand et al., 2005; Sections 2.3; 2.4; 2.5; 6.2.1; 6.2.7) (Standard)
3. The MWT is used in association with the clinical history to assess the ability to maintain wakefulness. (Arand et al., 2005; Sections 2.3; 2.4; 2.5; 2.6) (Standard)
4. The MWT 40-minute protocol is recommended when the sleep clinician requires objective data to assess an individual's ability to remain awake. (Arand et al., 2005; Sections 6.2.8; 7.0) (Option)
5. To provide a valid assessment of sleepiness or wakefulness, the MSLT and MWT must be performed under appropriate conditions using proper recording techniques and accepted protocols, with interpretation by a qualified and experienced clinician. (Arand et al., 2005; Sections 2.6; 6.2.6; 6.2.8; 7.0) (Standard)

Specific Indications for Use of the MSLT

1. The MSLT is indicated as part of the evaluation of patients with suspected narcolepsy to confirm the diagnosis. (Arand et al., 2005; Sections 6.2.1; 6.2.2) (Standard)
2. The MSLT may be indicated as part of the evaluation of patients with suspected idiopathic hypersomnia to help differentiate idiopathic hypersomnia from narcolepsy. (Arand et al., 2005; Sections 6.2.3) (Option)

3. The MSLT is not routinely indicated in the initial evaluation and diagnosis of obstructive sleep apnea syndrome or in assessment of change following treatment with nasal continuous positive airway pressure (CPAP).
4. The MSLT is not routinely indicated for evaluation of sleepiness in medical and neurological disorders (other than narcolepsy), insomnia, or circadian rhythm disorders (Arand et al., 2005; Sections 6.2.5) (Option)
5. Repeat MSLT testing may be indicated in the following situations:
    a. When the initial test is affected by extraneous circumstances or when appropriate study conditions were not present during initial testing
    b. When ambiguous or uninterpretable findings are present
    c. When the patient is suspected to have narcolepsy but earlier MSLT evaluation(s) did not provide polygraphic confirmation (Arand et al., 2005; Sections 6.2.2) (Standard)

Specific Indications for Use of the MWT

1. The MWT 40-minute protocol may be used to assess an individual's ability to remain awake when his or her inability to remain awake constitutes a public or personal safety issue. (Arand et al., 2005; Sections 6.2.6; 7.0) (Option)
2. The MWT may be indicated in patients with excessive sleepiness to assess response to treatment. (Arand et al., 2005; Sections 6.2.7) (Guideline)

Recommendations for the MSLT Protocol

(Adapted from Carskadon et al., 1986. Modified by collective expert opinion using Rand/UCLA Appropriateness Method)

1. The MSLT consists of five nap opportunities performed at two-hour intervals. The initial nap opportunity begins 1.5 to 3 hours after termination of the nocturnal recording. A shorter four-nap test may be performed but this test is not reliable for the diagnosis of narcolepsy unless at least two sleep onset rapid eye movement (REM) periods have occurred.
2. The MSLT must be performed immediately following polysomnography recorded during the individual's major sleep period. The use of MSLT to support a diagnosis of narcolepsy is suspect if total sleep time (TST) on the prior night sleep is less than 6 hours. The test should not be performed after a split-night sleep study (combination of diagnostic and therapeutic studies in a single night).
3. Sleep logs may be obtained for 1 week prior to the MSLT to assess sleep-wake schedules.
4. Standardization of test conditions is critical for obtaining valid results. Sleep rooms should be dark and quiet during testing. Room temperature should be set based on the patient's comfort level.
5. Stimulants, stimulant-like medications, and REM suppressing medications should ideally be stopped 2 weeks before MSLT. Use of the patient's other usual medications (e.g., antihypertensives, insulin, etc.) should be thoughtfully planned by the sleep clinician before MSLT testing so that undesired influences by the stimulating or sedating properties of the medications are minimized. Drug screening may be indicated to ensure that sleepiness on the MSLT is not pharmacologically induced. Drug screening is usually performed on the morning of the MSLT, but its timing and the circumstances of the testing may be modified by the clinician. Smoking

should be stopped at least 30 minutes prior to each nap opportunity. Vigorous physical activity should be avoided during the day and any stimulating activities by the patient should end at least 15 minutes prior to each nap opportunity. The patient must abstain from any caffeinated beverages and avoid unusual exposures to bright sunlight. A light breakfast is recommended at least 1 hour prior to the first trial, and a light lunch is recommended immediately after the termination of the second noon trial.

6. Sleep technologists who perform MSLTs should be experienced in conducting the test.
7. The conventional recording montage for the MSLT includes central electroencephalogram (EEG) (C3-A2, C4-A1) and occipital (O1-A2, O2-A1) derivations, left and right eye electrooculograms (EOGs), mental/submental electromyogram (EMG), and electrocardiogram (EKG).
8. Prior to each nap opportunity, the patient should be asked if they need to go to the bathroom or need other adjustments for comfort. Standard instructions for bio-calibrations (i.e., patient calibrations) prior to each nap include: (1) lie quietly with your eyes open for 30 seconds, (2) close both eyes for 30 seconds, (3) without moving your head, look to the right, then left, then right, then left, right and then left, (4) blink eyes slowly for 5 times, and (5) clench or grit your teeth tightly together.
9. With each nap opportunity the subject should be instructed as follows: "Please lie quietly, assume a comfortable position, keep your eyes closed, and try to fall asleep." The same instructions should be given prior to every test. Immediately after these instructions are given, bedroom lights are turned off, signaling the start of the test. Between naps, the patient should be out of bed and prevented from sleeping. This generally requires continuous observation by a laboratory staff member.
10. Sleep onset for the clinical MSLT is determined by the time from lights out to the first epoch of any stage of sleep, including stage 1 sleep. Sleep onset is defined as the first epoch of greater than 15 sec of cumulative sleep in a 30-sec epoch. The absence of sleep on a nap opportunity is recorded as a sleep latency of 20 minutes. This latency is included in the calculation of mean sleep latency (MSL). In order to assess for the occurrence of REM sleep, in the clinical MSLT the test continues for 15 minutes from after the first epoch of sleep. The duration of 15 minutes is determined by "clock time," and is not determined by a sleep time of 15 minutes. REM latency is taken as the time of the first epoch of sleep to the beginning of the first epoch of REM sleep regardless of the intervening stages of sleep or wakefulness.
11. A nap session is terminated after 20 minutes if sleep does not occur.
12. The MSLT report should include the start and end times of each nap or nap opportunity, latency from lights out to the first epoch of sleep, mean sleep latency (arithmetic mean of all naps or nap opportunities), and number of sleep-onset REM periods (defined as greater than 15 sec of REM sleep in a 30-sec epoch).
13. Events that represent deviation from standard protocol or conditions should be documented by the sleep technologist for review by the interpreting sleep clinician.

Recommendations for the MWT protocol

(Developed from methods in Doghramji et al., 1997. Modified by collective expert opinion using Rand/UCLA Appropriateness Method)

1. The 4-trial MWT 40-minute protocol is recommended. The MWT consists of four trials performed at two-hour intervals, with the first trial beginning about 1.5 to 3 hours after the patient's usual wake-up time. This usually equates to a first trial starting at 0900 or 1000 hours.
2. Performance of a polysomnogram (PSG) prior to MWT should be decided by the clinician based on clinical circumstances.
3. Based on the Rand/UCLA Appropriateness Method, no consensus was reached regarding the use of sleep logs prior to the MWT; there are instances, based on clinical judgment, when they may be indicated.
4. The room should be maximally insulated from external light. The light source should be positioned slightly behind the subject's head such that it is just out of his/her field of vision, and should deliver an illuminance of 0.10 to 0.13 lux at the corneal level (a 7.5 W night light can be used, placed 1 foot off the floor and 3 feet laterally removed from the subject's head). Room temperature should be set based on the patient's comfort level. The subject should be seated in bed, with the back and head supported by a bedrest (bolster pillow) such that the neck is not uncomfortably flexed or extended.
5. The use of tobacco, caffeine, and other medications by the patient before and during MWT should be addressed and decided upon by the sleep clinician before MWT. Drug screening may be indicated to ensure that sleepiness/wakefulness on the MWT is not influenced by substances other than medically prescribed drugs. Drug screening is usually performed on the morning of the MWT, but its timing and the circumstances of the testing may be modified by the clinician. A light breakfast is recommended at least 1 hour prior to the first trial, and a light lunch is recommended immediately after the termination of the secondnoon trial.
6. Sleep technologists who perform the MWT should be experienced in conducting the test.
7. The conventional recording montage for the MWT includes central EEG (C3-A2, C4-A1) and occipital (O1-A2, O2-A1) derivations, left and right eye EOGs, mental/submental EMG, and EKG.
8. Prior to each trial, the patient should be asked if they need to go to the bathroom or need other adjustments for comfort. Standard instructions for bio-calibrations (i.e., patient calibrations) prior to each trial include: (1) sit/lie quietly with your eyes open for 30 seconds, (2) close both eyes for 30 seconds, (3) without moving your head, look to the right, then left, then right, then left, right and then left, (4) blink eyes slowly for 5 times, and (5) clench or grit your teeth tightly together.
9. Instructions to the patient consist of the following: "Please sit still and remain awake for as long as possible. Look directly ahead of you, and do not look directly at the light." Patients are not allowed to use extraordinary measures to stay awake such as slapping the face or singing.
10. Sleep onset is defined as the first epoch of greater than 15 sec of cumulative sleep in a 30-sec epoch.
11. Trials are ended after 40 minutes if no sleep occurs, or after unequivocal sleep, defined as three consecutive epochs of stage 1 sleep, or one epoch of any other stage of sleep.
12. The following data should be recorded: start and stop times for each trial, sleep latency, total sleep time, stages of sleep achieved for each trial, and the mean sleep latency (the arithmetic mean of the four trials).
13. Events that represent deviation from standard protocol or conditions should be documented by the sleep technologist for review by the sleep specialist.

Definitions:

Standard: This is a generally accepted patient-care strategy, which reflects a high degree of clinical certainty. The term standard generally implies the use of Level I Evidence, which directly addresses the clinical issue, or overwhelming Level II Evidence.

Guideline: This is a patient-care strategy, which reflects a moderate degree of clinical certainty. The term guideline implies the use of Level II Evidence or a consensus of Level III Evidence.

Option: This is a patient-care strategy, which reflects uncertain clinical use. The term option implies either inconclusive or conflicting evidence or conflicting expert opinion.

Classification of Evidence

Level I (Grade A Recommendation): Randomized well-designed trials with low alpha and beta error*

Level II (Grade B Recommendation): Randomized trials with high alpha and beta error*

Level III (Grade C Recommendation): Nonrandomized concurrently controlled studies

Level IV (Grade C Recommendation): Nonrandomized historically controlled studies

Level V (Grade C Recommendation): Case series

*Alpha error refers to the probability (generally set at 95% or greater) that a significant outcome (e.g., $p<0.05$) is not a result of chance occurrence. Beta error refers to the probability (generally set at 80 to 90% or greater) that a nonsignificant result (e.g., $p>0.05$) is the correct conclusion of the study or studies. The estimation of beta error is generally the result of a power analysis. The power analysis includes a sample size analysis to project the size of the study population necessary to ensure that significant differences will be observed if actually present.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is specifically stated for selected recommendations (See "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The use of the Multiple Sleep Latency Test and the Maintenance of Wakefulness Test may provide accurate diagnosis of suspected narcolepsy, suspected idiopathic hypersomnia, and inability to stay awake, and may provide accurate assessment of response to treatment with medications for narcolepsy or idiopathic hypersomnia.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These practice parameters define principles of practice that should meet the needs of most patients in most situations. These guidelines should not, however, be considered inclusive of all proper methods of care or exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding propriety of any specific care must be made by the physician, in light of the individual circumstances presented by the patient, available diagnostic tools, accessible treatment options, and resources.
- These practice parameters reflect the state of knowledge at the time of publication and will be reviewed, updated, and revised as new information becomes available.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Littner MR, Kushida C, Wise M, Davila DG, Morgenthaler T, Lee-Chiong T, Hirshkowitz M, Loube DL, Bailey D, Berry RB, Kapen S, Kramer M. Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test. Sleep 2005 Jan 1;28(1):113-21. [18 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Jan 1

GUIDELINE DEVELOPER(S)

American Academy of Sleep Medicine - Professional Association

SOURCE(S) OF FUNDING

American Academy of Sleep Medicine

GUIDELINE COMMITTEE

Standards of Practice Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee Members: Michael R. Littner, MD, VA Greater Los Angeles Healthcare System and David Geffen School of Medicine at UCLA, Sepulveda, CA; Clete Kushida, MD, PhD, Stanford University Center of Excellence for Sleep Disorders, Stanford, CA; Merrill Wise, MD, Departments of Pediatrics and Neurology, Baylor College of Medicine, Houston, TX; David G. Davila, MD, Sleep Disorders Center, Baptist Medical Center, Little Rock, AR; Timothy Morgenthaler, MD, Mayo Sleep Disorders Center, Mayo Clinic, Rochester, MN; Teofilo Lee-Chiong, MD, National Jewish Medical and Research Center, Sleep Clinic, Denver, CO; Max Hirshkowitz, PhD, Baylor College of Medicine and VA Medical Center, Houston, TX; Daniel L. Loube, MD, Sleep Medicine Institute, Swedish Medical Center, Seattle, WA; Dennis Bailey, DDS, Englewood, Colorado; Richard B. Berry, MD, Malcolm Randall VAMC/Univ. of Florida - Gainesville, Fla; Sheldon Kapen, MD, VA Medical Center and Wayne State University, Detroit, MI; Milton Kramer, MD, Maimoides Medical Center, Psychiatry Department, Brooklyn, NY and New York University School of Medicine, New York, NY

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Dr. Berry has received research support from Dymedix, Itamar, and ResMed. Dr. Davila is a paid investigator for Neurocrine, Nellcor, and Pharmacia; and has participated in speaking engagements supported by Sanofi and Cephalon. Dr. Kushida has received research support from GlaxoSmithKline, Pfizer, Xenoport, Boeringer Ingleheim, and Respironics; is a medical advisory board member and a speakers' bureau member for GlaxoSmithKline; and participates in speaking engagements supported by GlaxoSmithKline. Dr. Littner is a member of the speakers' bureau for GlaxoSmithKline, Boehringer-Ingelheim, and Novartis; and is or has recently been a consultant for GlaxoSmithKline, Astrazeneca, Pfizer, Novartis, Boehringer-Ingelheim, Otsuka. Dr. Hirshkowitz is a member of the speakers' bureau for Sanofi and Cephalon; and has received honoraria from Sanofi and Cephalon. Dr. Bailey is a partner in Dental Appliance Innovators, Inc.; and participates in dental and medical education for Dental Appliance Innovators, Inc. Drs. Loube, Wise, Kramer, Morgenthaler, Kapen, and Lee-Chiong have indicated no financial conflicts of interest.

Dr. Sangal has received support from Cephalon, Lilly, Takeda, Sanofi, Novartis and Aventis. Dr. Bonnet has received research support from Cephalon and Pfizer. Dr. Mitler is an owner of Pacific Sleep Medicine Services, Inc. Drs. Arand, Hurwitz, and Rosa have indicated no financial conflicts of interest.

All members of the American Academy of Sleep Medicine (AASM) Standards of Practice Committee and Board of Directors completed detailed conflict-of-interest statements and were found to have no conflicts of interest with regard to this subject.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Sleep Medicine (AASM) Web site.

Print copies: Available from the Standards of Practice Committee, American Academy of Sleep Medicine, One Westbrook Corporate Center, Suite 920, Westchester, IL 60154. Web site: www.aasmnet.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Arand D, Bonnet M, Hurwitz T, Mitler M, Rosa R, Sangal RB. The clinical use of the MSLT and MWT. Sleep 2005 Jan 1;28(1):123-44. Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Sleep Medicine Web site.
- The clinical use of the MSLT and MWT. Evidence tables. 48 p. Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Sleep Medicine Web site.

Print copies: Available from the Standards of Practice Committee, American Academy of Sleep Medicine, One Westbrook Corporate Center, Suite 920, Westchester, IL 60154. Web site: www.aasmnet.org.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on May 2, 2005. The information was verified by the guideline developer on June 2, 2005.

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NGC DISCLAIMER

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